This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) An enhanced nanocomposite comprising of:

   a powder having a surface modified nanoscale layer selected from the group consisting of metals, metal oxides, organometallics, semiconductors, alloys, carbon products, ~~and~~ or combinations thereof, the powder having an average particle size of from about 1 nanometer to about 1 micron, a nanoscale layer having an average thickness of from about 1 nanometer to about 100 nanometers; and

   a nanocomposite conductive medium having an average particle size of from about 1 nanometer to about 1 micron selected from the group consisting of monomers, polymers, organometallics, and combinations thereof.

2. (canceled)

3. (currently amended) The ~~conductive medium~~ enhanced nanocomposite according to claim 1, ~~claim 2,~~ wherein the conductive medium is functionalized with a nanoscale layer having an average thickness of from about 1 nanometer to about 100 nanometers.

4. (currently amended) The enhanced nanocomposite according to claim 1, whereby the enhanced nanocomposite is assembled into a multiple layer nanocomposite.

5. (currently amended) The ~~multiple layer~~ enhanced nanocomposite according to claim 4, wherein the multiple layer nanocomposite is subjected to a phonon or electron bias as induced by externally generated fields.

6. (currently amended) The enhanced nanocomposite ~~externally generated fields~~ according to claim 5, wherein at least one externally generated field is selected from the group consisting of ultrasonic, acoustic phonon, magnetic, electromagnetic, and electrical fields.

7. (currently amended) The ~~multiple layer~~ enhanced nanocomposite according to claim 4, wherein the enhanced nanocomposite is assembled into a matrix ~~is~~ comprised of at least one series of an alternating ~~layers~~ layer of nanocomposite doped with conductive additives with a layer of, ~~and~~ nanocomposite doped with semiconductor additives.

8. (currently amended) The enhanced nanocomposite ~~alternating layers~~ according to claim 7, wherein ~~the~~ each individual layer thickness is less than 100 nanometers.

9. (currently amended) The enhanced nanocomposite ~~alternating layers~~ according to claim 7, wherein ~~the~~ each individual layer thickness is less than 10 nanometers.

10. (currently amended) The enhanced nanocomposite ~~functionalized powders~~ according to claim 3, wherein the conductive medium is ~~are~~ functionalized for at least one purpose selected from the group promoting dispersion, enhancing corrosion resistance, reducing friction, enhancing chemical stability, enhancing molecular polarity, modifying hydrophobic or hydrophilic characteristics, enhancing solubility, providing stability against thermal and ultraviolet degradation, enhancing lubricity, improving mold release, varying color, incorporating nucleating agents, enhancing plasticity, or enhancing means to make emulsions.

11. (currently amended) The enhanced nanocomposite ~~powder having a surface modified nanoscale layer~~ according to claim 1, wherein the powder is further ~~is~~ functionalized for at least one purpose selected from the group consisting of promoting dispersion, enhancing corrosion resistance, reducing friction, enhancing chemical stability, enhancing molecular polarity, modifying hydrophobic or hydrophilic characteristics, enhancing solubility, providing stability against thermal and ultraviolet degradation, enhancing lubricity, improving mold release, varying color, incorporating nucleating agents, enhancing plasticity, or enhancing means to make emulsions.

12. (currently amended) The enhanced nanocomposite according to claim 1 is further comprised of surfactant wherein the interfacial tension of the powders is reduced.

13. (currently amended) The enhanced nanocomposite according to claim 1 is further comprised of quantum dots wherein the flow of electrons is further enhanced by reducing the mean path length between said powders ~~according to claim 1~~.

14. (currently amended) The enhanced nanocomposite according to claim 1, wherein the powders are selected from group consisting of metals, metal oxides, alloys, and combinations thereof ~~according to claim 1~~ is further subjected to microetching process wherein the surface topography is modified with nanoscale dendritic features.

15. (currently amended) The enhanced nanocomposite according to claim 1, wherein the carbon products, monomers, polymers, organometallics, metals, metal oxides, and semiconductors are chemically modified by non-thermal means.

16. (currently amended) The enhanced nanocomposite according to claim 15, wherein the non-thermal means ~~according to claim 15~~ is selected from the group consisting of microwave ~~and~~ or electron beam.

17. (currently amended) The enhanced nanocomposite according to claim 15, wherein the non-thermal means ~~according to claim 15~~ is subjected to a phonon or electron bias as induced by externally generated fields.

18. (currently amended) The enhanced nanocomposite according to claim 17, wherein the externally generated fields ~~according to claim 17, wherein the field~~ is selected from the group consisting of ultrasonic, acoustic phonon, magnetic, electromagnetic, ~~and~~ or electrical fields.

19. (currently amended) The enhanced ~~Products are made from the multiple layer~~ nanocomposite according to claim 1, wherein the enhanced nanocomposite is utilized within ~~claim 4~~ energy conversion products including products selected from the group consisting of thermionics, thermoelectric, photovoltaic, fuel cell, piezoelectrics, photoelectrics, ballistic tunneling, thermal diodes; and photon, electron, or phonon emitters.

20. (currently amended) The ~~products~~ enhanced nanocomposite according to claim 19, wherein the enhanced nanocomposite is ~~are~~ further subjected to a phonon or electron bias as induced by externally generated fields.

21. (currently amended) The enhanced nanocomposite ~~externally-generated-fields~~ according to claim 20, wherein the externally generated field is selected from the group consisting of ultrasonic, acoustic phonon, magnetic, electromagnetic, ~~and~~ or electrical fields.

22. (currently amended) The enhanced nanocomposite ~~externally-generated-fields~~ according to claim 21, wherein the application of externally generated fields produces ~~produces~~ byproducts including byproducts selected from the group consisting of conductive polymers, nanotubes, nanohorns, ~~and~~ fullerenes, or combinations thereof.

23. (canceled)

24. (new) An enhanced nanocomposite assembled into an energy conversion product selected from the group consisting of thermionics, thermoelectric, photovoltaic, fuel cell, piezoelectrics, photoelectrics, ballistic tunneling, thermal diodes; and photon, electron, or phonon emitters comprising of:

a powder having a surface modified nanoscale layer selected from the group consisting of metals, metal oxides, organometallics, semiconductors, alloys, carbon products, or combinations thereof, the powder having an average particle size of from about 1 nanometer to about 1 micron, a nanoscale layer having an average thickness of from about 1 nanometer to about 100 nanometers; and

a nanocomposite conductive medium having an average particle size of from about 1 to about 500 nanometers.

25. (new) An enhanced nanocomposite assembled into matrix comprised of at least one series of an alternating layer of nanocomposite doped with conductive additives with a layer of nanocomposite doped with semiconductor additives comprised of:

a powder having a surface modified nanoscale layer selected from the group consisting of metals, metal oxides, organometallics, semiconductors, alloys, carbon products, or combinations thereof, the powder having an average particle size of from about 1 nanometer to about 1 micron, a nanoscale layer having an average thickness of from about 1 nanometer to about 100 nanometers; and

a nanocomposite conductive medium having an average particle size of from about 1 to about 500 nanometers.